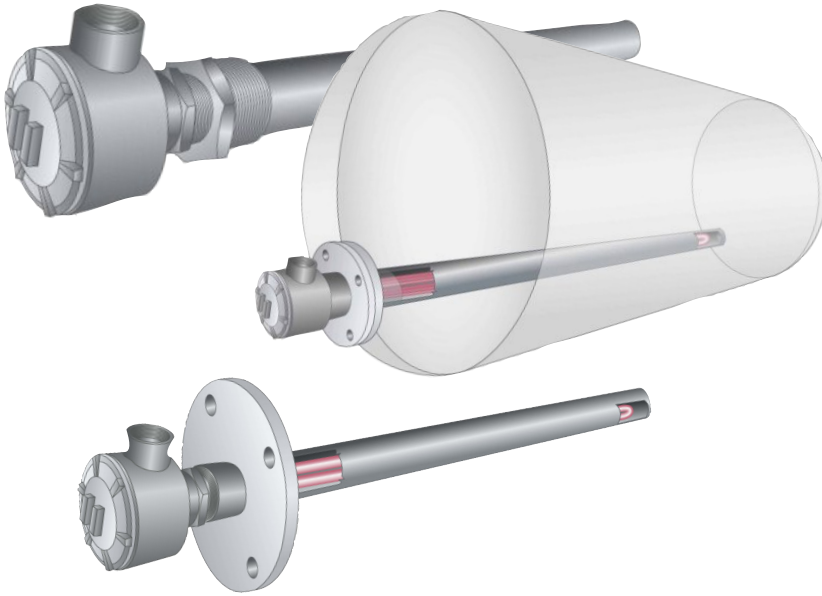




# PIPE INSERT HEATERS

## INFORMATION



Pipe Insert Heaters use an ANSI flanged heater or an NPT screw plug heater mounted inside a pipe. These offer you the advantages of direct immersion heaters with the benefit of being able to service the heater without draining the tank. The Incoloy sheathed element(s) inside the pipe are carefully designed for this application, and transfer their heat to the inside pipe wall by convection and radiation.

The large surface area of the pipe in contact with your liquid greatly reduces the intensity making the pipe insert heater ideally suited for heating:

- Very viscous materials like Bunker C Fuel Oil
- Temperature sensitive materials like glucose & liquid sugars
- Bulk storage of corrosive Materials

## STANDARD SIZES & MATERIALS

### SHEATH MATERIALS

Sheath Material	Application	Watt Density (W/in <sup>2</sup> )
Incoloy 800®	Incoloy 800 is used for all pipe insert heating applications. Maximum sheath temperature 1400°F	3-15

### STANDARD FLANGE

<b>ANSI FLANGE SIZES:</b>	2" through 24"
<b>ANSI FLANGE RATING:</b>	150 lb, 300 lb, 600 lb
<b>MATERIALS:</b>	Carbon Steel, Stainless Steel, Titanium
<b>NON-ANSI FLANGES:</b>	Available in a variety of sizes and materials

### STANDARD PLUG

<b>NPT SIZES:</b>	1", 1 <sup>1</sup> / <sub>4</sub> ", 1 <sup>1</sup> / <sub>2</sub> ", 2", 2 <sup>1</sup> / <sub>2</sub> "
<b>BRITISH SIZES- BSP, BSPP:</b>	1", 1 <sup>1</sup> / <sub>4</sub> ", 1 <sup>1</sup> / <sub>2</sub> ", 2", 2 <sup>1</sup> / <sub>2</sub> "
<b>MATERIALS:</b>	Brass, Steel, Stainless Steel

## TERMINAL HOUSINGS

- NEMA 1 SHEET METAL HOUSING (INTENDED FOR INDOOR USE ONLY)
- NEMA 4 (STANDARD) MOISTURE RESISTANT TERMINAL HOUSING
- NEMA 4X EPOXY PAINTED OR STAINLESS STEEL MOISTURE RESISTANT TERMINAL HOUSING
- NEMA 7 HAZARDOUS LOCATION TERMINAL HOUSING

## OPTIONS

## BUILT IN THERMOSTAT

<b>Power Ratings</b>	<ul style="list-style-type: none"> <li>• Up to 240 volts, 25-amp double pole, single throw (DPST)</li> <li>• Up to 600 volts, 15-amp triple pole, single throw (TPST)</li> </ul>
<b>Temperature Ratings</b>	<ul style="list-style-type: none"> <li>• 160 to 370°C (320-700°F)</li> </ul>
<b>Thermostat Application</b>	Since the thermostat will be located inside the pipe, it will be measuring the internal pipe temperature. The thermostat is intended for high limit purposes and is not suitable for process control.

## BUILT IN THERMOCOUPLE

<b>Sensors</b>	"K" calibration thermocouple for high limit sheath protection. Since the thermocouple will be located inside the pipe, it will be measuring the internal pipe temperature. The thermostat is intended for high limit purposes and is not suitable for process control.
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## STANDARD PRODUCTS

## Screwplug Mount - Add "K" to the end of the part number for Type K thermocouple

MPI P/N	kW	Insertion Length	Phase	Number of Elements	Screwplug Size
IM-PIS001	1	30"	1	1	2" NPT
IM-PIS002	2	54"	1	1	2" NPT
IM-PIS003	3	78"	1	1	2" NPT
IM-PIS004	4	102"	1	1	2" NPT
IM-PIS005	5	126"	1	1	2" NPT
IM-PIS006	6	138"	1	1	2" NPT
IM-PIS007	1.5	30"	1	2	2" NPT
IM-PIS008	3	54"	1	2	2" NPT
IM-PIS009	4	78"	1	2	2" NPT
IM-PIS010	6	102"	1	2	2" NPT
IM-PIS011	7.5	126"	1	2	2" NPT
IM-PIS012	8.5	138"	1	2	2" NPT

## Screwplug Mount (Pipe Included)

MPI P/N	kW	Insertion Length	Phase	Screwplug Size
IM-PPIS001	1	24"	1	2.5" NPT
IM-PPIS002	2	30"	1	2.5" NPT
IM-PPIS003	3	42"	1	2.5" NPT
IM-PPIS004	4	48"	1	2.5" NPT
IM-PPIS005	5	57"	1	2.5" NPT
IM-PPIS006	6	66"	1	2.5" NPT
IM-PPIS007	7	72"	1	2.5" NPT
IM-PPIS008	8	81"	1	2.5" NPT
IM-PPIS009	9	90"	1	2.5" NPT
IM-PPIS010	10	96"	1	2.5" NPT
IM-PPIS011	11	117"	1	2.5" NPT
IM-PPIS012	12	114"	1	2.5" NPT
IM-PPIS013	13	120"	1	2.5" NPT

## Flange Mount - Add "K" to the end of the part number for Type K thermocouple

MPI P/N	kW	Insertion Length	Phase	Number of Elements	Flange Size
IM-PIF001	1	30"	1	1	3" 150psi
IM-PIF002	2	54"	1	1	3" 150psi
IM-PIF003	3	78"	1	1	3" 150psi
IM-PIF004	4	102"	1	1	3" 150psi
IM-PIF005	5	126"	1	1	3" 150psi
IM-PIF006	6	138"	1	1	3" 150psi
IM-PIF007	7	174"	1	1	3" 150psi
IM-PIF008	8	198"	1	1	3" 150psi
IM-PIF009	9	222"	1	1	3" 150psi
IM-PIF010	10	246"	1	1	3" 150psi
IM-PIF011	11	270"	1	1	3" 150psi
IM-PIF012	12	294"	1	1	3" 150psi
IM-PIF013	13	318"	1	1	3" 150psi
IM-PIF014	2	30"	1 or 3	3	3" 150psi
IM-PIF015	3.5	54"	1 or 3	3	3" 150psi
IM-PIF016	5	78"	1 or 3	3	3" 150psi
IM-PIF017	7.5	102"	1 or 3	3	3" 150psi
IM-PIF018	9.5	126"	1 or 3	3	3" 150psi
IM-PIF019	11	138"	1 or 3	3	3" 150psi
IM-PIF020	13	174"	1 or 3	3	3" 150psi
IM-PIF021	15	198"	1 or 3	3	3" 150psi
IM-PIF022	17	222"	1 or 3	3	3" 150psi
IM-PIF023	19	246"	1 or 3	3	3" 150psi
IM-PIF024	21	270"	1 or 3	3	3" 150psi
IM-PIF025	23	294"	1 or 3	3	3" 150psi
IM-PIF026	25	318"	1 or 3	3	3" 150psi